

## PRODUCT DATA SHEET

# Sarnafil® G 410-L Felt

### POLYMERIC MEMBRANE FOR ROOF WATERPROOFING

#### DESCRIPTION

Sarnafil® G 410 L Felt is a multi-layer, synthetic roof waterproofing membrane based on premium-quality polyvinyl chloride (PVC) with an inlay of glass non-woven and a polyester fleece backing.

Sarnafil® G 410 L Felt has a unique lacquer coating applied to the top of the membrane to reduce staining from airborne dirt and pollutants.

#### USES

Waterproofing membrane for:

- Fully adhered, exposed flat roofs

#### CHARACTERISTICS / ADVANTAGES

- Outstanding resistance to weathering, including permanent UV irradiation
- Excellent weld ability
- Excellent flexibility in cold temperatures
- Excellent dimensional stability
- High resistance to mechanical impact
- High water vapour permeability

- High solar reflectance (in case of white color top layer)
- Available in various colors
- Reduced dirt pick-up due to lacquer coating
- Recyclable

#### APPROVALS / STANDARDS

Sarnafil® G 410 L Felt is designed and manufactured to meet most international recognized standards.

- Polymeric sheets for roof waterproofing according to EN 13956, certified by notified body and provided with the CE-mark (1.2 mm and 1.5 mm).
- Polymeric PVC sheets for waterproofing according to GB12952, Type G.
- Polymeric sheets for roof waterproofing according to JIS A6008, certified by notified body CECN09001 and provided with the JIS-mark.
- Official quality approvals and agreement certificates and approvals.
- Monitoring and assessment by approved laboratories.
- Quality management system in accordance with EN ISO 9001/14001.

#### PRODUCT INFORMATION

<b>Packaging</b>	Sarnafil® G 410 L Felt standard rolls are wrapped individually in a blue PE-foil. The roll width is 2.0 m and the roll length depends on the membrane thickness:	
	1.2 mm	20.0 m (approx. 74 kg per roll)
	1.5 mm	20.0 m (approx. 86 kg per roll)
	2.0 mm	15.0 m (approx. 87 kg per roll)
<b>Appearance / Colour</b>	<b>Form</b>	<b>Colour</b>
	Membrane	Top Surface : White (other colours on demand) Bottom Surface : Dark grey
<b>Shelf life</b>	Product does not expire if correctly stored	

<b>Storage conditions</b>	Rolls must be stored in a horizontal position on pallet and protected from direct sunlight, rain and snow. Do not stack pallets of rolls during transport or storage.
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## TECHNICAL INFORMATION

	<b>G 410-12 L Felt</b>	<b>G 410-15 L Felt</b>	<b>G 410-20 L Felt</b>	
<b>Tensile strength</b>	≥ 650 N/50 mm <sup>2</sup>	≥ 650 N/50 mm <sup>2</sup>	≥ 650 N/50 mm <sup>2</sup>	(EN 12311-2)
<b>Elongation</b>	≥ 45 %	≥ 45 %	≥ 45 %	(EN 12311-2)
<b>Effects of Liquid Chemicals Include water</b>	On request	On request	On request	(EN 1847)
<b>Effective Thickness</b>	1.2 mm	1.5 mm	2.0 mm	(EN 1849-2)
<b>Water Vapour Transmission properties</b>	15 000	15 000	15 000	(EN 1931)
<b>Joints Sheer Resistance</b>	≥ 500 N/50 mm	≥ 500 N/50 mm	≥ 500 N/50 mm	(EN 12317-2)
<b>Water Tightness</b>	Pass	Pass	Pass	(EN 1928)
<b>UV Exposure</b>	Pass (>5000 h / grade 0)	Pass (>5000 h / grade 0)	Pass (>5000 h / grade 0)	(EN 1297)
<b>Hail Resistance</b>				(EN 13583)
<b>Rigid substrate</b>	≥ 17 m/s	≥ 20 m/s	≥ 20 m/s	
<b>Flexible substrate</b>	≥ 25 m/s	≥ 28 m/s	≥ 33 m/s	
<b>Resistance to Impact</b>				(EN 12691)
<b>Hard substrate</b>	≥ 500 mm	≥ 700 mm	≥ 800 mm	
<b>Soft substrate</b>	≥ 1 100 mm	≥ 1 300	≥ 1 500	
<b>Resistance to static load</b>				(EN 12730)
<b>Rigid substrate</b>	≥ 20 kg	≥ 20 kg	≥ 20 kg	
<b>Soft substrate</b>	≥ 20 kg	≥ 20 kg	≥ 20 kg	
<b>Dimensional Stability</b>	≤  0.2  %	≤  0.2  %	≤  0.2  %	(EN 1107-2)
<b>Foldability at Low Temperature</b>	≤ -25 °C	≤ -25 °C	≤ -25 °C	(EN 495-5)
<b>SRI (Solar Reflectance Index)</b>		106		(ASTM E 1980-01)
<b>Reaction to fire</b>	E	E	E	(EN ISO 11925-2) (EN 13501-1)

## SYSTEM INFORMATION

<b>System Structure</b>	A wide range of tested and approved Sika accessories for the single ply roofing system is available: vapour retarder, thermal insulation, separation layer, fasteners, detailing membrane, contact adhesive, perimeter bars, welding cords, termination bars, sealants, prefabricated parts (corners, roof drains, scuppers, walkway pads, lightning conductor clips etc.) etc.
<b>Compatibility</b>	Sarnafil® G 410 L Felt is not compatible with direct contact to other plastics, e.g. EPS, XPS, PUR, PIR or PF. Sarnafil® G 410 L Felt is not resistant to tar, bitumen, oil and solvent containing materials.
<b>Ambient Temperature</b>	The use of Sarnafil® G 410 L Felt membrane is limited to geographical locations with an average monthly ambient temperature in the range of -30 °C to +50 °C.

# APPLICATION INSTRUCTION

## SUBSTRATE QUALITY

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs. The supporting layer must be compatible to the membrane, clean, dry and free of grease and dust.

## APPLICATION

- Refer to the Sika Installation Manuals for single ply PVC membranes.
- Sarnafil® G 410 L Felt is bonded to the substrate by a suitable Sarnacol adhesive (see Sarnacol product documentation).
- Overlap seams are welded by electric hot air welding equipment, such as manual hot air welding machines and pressure rollers or automatic hot air welding machines with controlled hot air temperature.
- Recommended type of equipment: Leister Triac PID (manual welding) and Sarnamatic 661<sup>plus</sup> (automatic welding)
- Welding parameters including temperature, machine speed, air flow, pressure and machine settings must be evaluated, adapted and checked on site according to the type of equipment and the climatic situation prior to welding. The effective width of welded overlaps by hot air should be minimum 20 mm.
- The seams must be mechanically tested with screw driver to ensure the integrity / completion of the weld. Any imperfections must be rectified by hot air welding.

## LIMITATIONS

Installation works must be carried out only by Sika instructed and approved roofing contractors.

Temperature limits for the installation of the membrane:

Substrate temperature: -30 °C min. / +60 °C max.

Ambient temperature: -20 °C min. / +60 °C max.

Installation of some ancillary products, e.g. contact adhesives / cleaners is limited to temperatures above +5 °C. Please observe information given by Product Data Sheets.

Special measures may be compulsory for installation below +5 °C ambient temperature due to safety requirements in accordance with national regulations.

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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